

IN THE CLAIMS:

1-14 (Canceled)

15. (Original) An apparatus comprising:

an interferometer to control the power of an added signal or a dropped signal, the interferometer including an optical waveguide grating to select a first wavelength channel of the added signal or the dropped signal and to filter the dropped signal from an input data stream and to multiplex the added signal into an output data stream, a phase of said interferometer being adjusted to provide hitless optical add-drop multiplexing when a reflection band of said waveguide grating is being adjusted to select said first wavelength channel.

16. (Original) The apparatus of Claim 15 further comprising:

a set of heaters operatively coupled to the interferometer to adjust the reflection band of the waveguide grating or the phase of the interferometer.

17-18. (Canceled)

19. (Currently Amended) ~~The apparatus of Claim 17~~ An apparatus comprising:

a Sagnac interferometer comprising a waveguide grating to select a wavelength of an added or dropped signal, wherein said waveguide grating is distributed; and
a phase adjustment circuit coupled with said Sagnac interferometer to control the power of said added or dropped signal.

20. (Currently Amended) The apparatus of Claim ~~17~~ 19 wherein said phase adjustment circuit comprises a heater.
21. (Currently Amended) The apparatus of Claim ~~17~~ 19 wherein said phase adjustment circuit is piezoelectric.
22. (Currently Amended) The apparatus of Claim ~~17~~ 19 further comprising:
a frequency adjustment circuit coupled with said waveguide grating to tune the frequency of said added or dropped signal.
23. (Original) The apparatus of Claim 22 wherein said frequency adjustment circuit comprises a heater.
24. (Original) The apparatus of Claim 22 wherein said frequency adjustment circuit is piezoelectric.
25. (Currently Amended) The apparatus of Claim ~~17~~ 19 further comprising:
a frequency adjustment circuit coupled with said waveguide grating to tune a reflection band of said waveguide grating to select the wavelength of said added or dropped signal; and
a phase adjustment circuit coupled with said Sagnac interferometer to provide hitless optical add-drop multiplexing when the reflection band of said waveguide grating is being tuned.